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DIALOG(R)File 351:Derwent WPI

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WPI Acc No: 1989-139652/198919

XRAM Acc No: C89-061708

XRPX Acc No: N89-106633

Optical fibre mfr. from fluorine-doped silica tube - by diffusion heat treatment to form fluorine-depleted core layer

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Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2620696	A	19890324	FR 8713070	A	19870922	198919 B

Priority Applications (No Type Date): FR 8713070 A 19870922

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2620696	A		9		

Abstract (Basic): FR 2620696 A

An optical fibre, comprising a silica core surrounded by fluorine-doped silica, is mfd. from a silica starting tube, which is fluorine doped, at least over a certain distance, extending from its internal surface, to a doping level, suitable for the sheath of a fibre having a non-doped or less doped silica core, by treating the tube to form a less doped core layer on its internal surface, collapsing the tube to form a solid cylindrical preform and drawing a fibre from the preform.

The novelty is that the tube treatment step is a fluorine depletion operation comprising heating the tube to cause fluorine diffusion out of the fluorine-doped silica while removing the fluorine diffused into the hollow interior of the tube so that a fluorine-depleted core layer is formed on the internal surface of the tube.

ADVANTAGE - An optimal refractive index profile with continuous graduation from the sheath compsn. to the core compsn. can be produced.

Title Terms: OPTICAL; FIBRE; MANUFACTURE; FLUORINE; DOPE; SILICA; TUBE; DIFFUSION; HEAT; TREAT; FORM; FLUORINE; DEPLETED; CORE; LAYER

Derwent Class: L01; P81; V07

International Patent Class (Additional): C03B-037/01; G02B-006/18

File Segment: CPI; EPI; EngPI

Manual Codes (CPI/A-N): L01-F03F4

Manual Codes (EPI/S-X): V07-F01A1; V07-F01A3

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